

Harford County, Maryland

FLOODPLAIN MANAGEMENT PROGRAM



Chapter 131 of the Harford County Code, as amended

Effective March 6, 2000

DEPARTMENT OF PLANNING AND ZONING
Harford County, Maryland

Chapter 131. Floodplain Management Program

ARTICLE I. Purpose and General Provisions	1
§ 131-1. Findings and Intent.....	1
§ 131-2. Abrogation.	2
§ 131-3. Liability.	2
§ 131-4. Definitions.....	2
ARTICLE II. Establishment of the Floodplain District	7
§ 131-5. Establishment.....	7
§ 131-6. Floodplain Boundaries.	7
§ 131-7. Removal from the Special Flood Hazard Areas.	7
§ 131-8. Additions to Floodplain District.....	8
ARTICLE III. Development Regulations	9
§ 131-9. General.	9
§ 131-10. Conflicts.	9
§ 131-11. Tidal Floodplain, Approximate Floodplain, Floodway Fringe.....	9
§ 131-12. Floodway.	10
ARTICLE IV. Subdivision Approval	11
§ 131-13. Preliminary Plan.....	11
§ 131-14. Final Plats.....	11
ARTICLE V. Specific Requirements, Supplementary Regulations.....	13
§ 131-15. Placement of Buildings and Materials.	13
§ 131-16. Nonconforming Structures.	13
§ 131-17. Fill.	13
§ 131-18. Structures and Enclosures Below Base Flood Elevation.	14
§ 131-19. Storage.....	16
§ 131-20. Manufactured Homes.	16
§ 131-21. Utilities.	17
ARTICLE VI. Authorizations for Floodplain Development	19
§ 131-22. Application for Floodplain Authorization.	19
§ 131-23. Conditions of Floodplain Authorization.	19

§ 131-24. Floodplain Authorization Requirements.	19
ARTICLE VII. Floodplain Variance	21
§ 131-25. Floodplain Variance Application.	21
§ 131-26. Conditions for Granting the Variance.	21
§ 131-28. Grant of Variance.	22
§ 131-29. Issuance of Floodplain Variances.....	22
ARTICLE VIII. Administrative Procedures.	23
§ 131-30. Permits.	23
§ 131-31. Inspections.....	24
§ 131-32. Records.	24
§ 131-33. Violations.....	24
§ 131-34. Penalties and Administrative Fees.....	25
§ 131-35. Public Information.	25
§ 131-36. Flood Insurance.	25

Chapter 131. Floodplain Management Program

ARTICLE I. Purpose and General Provisions

§ 131-1. Findings and Intent.

A. Whereas:

- (1) Certain areas of Harford County are subject to periodic inundation, which may result in loss of life and property, risks to health and safety, disruption of commerce and governmental services and extraordinary public expenditures for flood protection and relief;
- (2) Flood losses and associated losses are created by structures inappropriately located, inadequately elevated or otherwise unprotected and vulnerable to floods or by development which increases flood damage to other lands or development;
- (3) The biological values of floodplains, particularly tidal and nontidal wetlands, can be adversely affected by floodplain development;
- (4) Harford County has the responsibility under the Flood Control and Watershed Management Act, §5-801 - 809 et seq., Environmental Article of the Annotated Code of Maryland, to control floodplain development in order to protect persons and property from danger and destruction and to preserve the biological values and the environmental quality of the watersheds or portions thereof under its jurisdiction;
- (5) Harford County has the responsibility under the National Flood Insurance Act of 1968, as amended, the flood disaster protection act of 1973, as amended, and the National Flood Insurance Reform Act of 1994, to adopt and enforce floodplain management regulations which meet the requirements of 44 C.F.R., Parts 55-57, et seq. (Code of Federal Regulations), in order to participate in the National Flood Insurance Program and remain eligible for federally subsidized flood insurance, federal disaster relief and federal and state financial assistance; and
- (6) Harford County has the responsibility, through the National Flood Insurance Program's Community Rating System, to implement flood hazard management activities which exceed the minimum standards established by the federal government in order to reduce national flood insurance premiums for the floodplain occupant, facilitate accurate flood insurance rating and promote the awareness of flood insurance.

- B. Now, therefore, it is the purpose of this Chapter to protect human life and health; to minimize public and private property damage; to encourage the utilization of appropriate construction practices in order to prevent or minimize flood damage in the future; to protect individuals from unwittingly buying lands and structures which are unsuited for intended purposes because of the flood hazards; to protect water supply, sanitary sewage disposal and natural drainage; to reduce financial burdens imposed on the community, its governmental units and its residents by preventing the unwise design

and construction of development in areas subject to flooding; to provide for public awareness of the flooding potential; and to provide for the biological and environmental quality of the watersheds or portions thereof located in Harford County. The provisions of this Chapter provide a unified comprehensive approach to floodplain management which addresses natural floodplain functions and requirements of the federal and state programs concerned with floodplain management, namely the National Flood Insurance Program, Code of Federal Regulations 59-79, on floodplain management, the State's Waterway Construction Permit Program, State Wetlands Permit Programs, the United States Army Corps of Engineers' Section 10 and Section 404 Permit Programs, the State's Coastal Zone Management Program and the Maryland Economic, Growth, Resource Protection and Planning Act of 1992.

§ 131-2. Abrogation.

- A. In their interpretation and application, the provisions of this Chapter shall be:
- (1) Considered as minimum requirements.
 - (2) Liberally construed in favor of proper flood hazard management.
 - (3) Deemed neither to limit nor repeal any other powers granted under the Annotated Code of Maryland.

§ 131-3. Liability.

The degree of flood protection provided by this Chapter is considered reasonable for regulatory purposes and is based on engineering experience and scientific methods of study. Floods of greater magnitude may occur or flood heights may be increased by man-made or natural causes. This Chapter does not imply that land outside the areas of the Floodplain District will be free from flooding or flood damage, nor that permitted development and land uses within the Floodplain District will be free of flooding and associated flood damage. The granting of a Floodplain Authorization is not a representation, guaranty or warranty of any kind and shall create no liability upon the County, its officials, agents or employees from any damage that may result from reliance on this Chapter.

§ 131-4. Definitions.

For the purposes of this Chapter, the following words have the meanings indicated unless the context clearly requires a different meaning or a different definition is adopted for a particular section.

ACCESSORY STRUCTURE OR USE -- A detached structure on the same lot/parcel of property as the principal structure, the use of which is incidental to the principal structure (e.g., shed, detached garage).

APPROXIMATE FLOODPLAIN -- Those portions of land within the Floodplain District subject to inundation by the one-percent annual flood, where a detailed study has not been performed but where a Base Flood boundary has been approximated on the Flood Insurance Rate Maps published by FEMA. These are designated as Zone A and Zone AO.

ASSESSED VALUE -- The full cash value as established by the Maryland Department of Assessments and Taxation for computing real property taxes.

BASE FLOOD -- The flood having a one percent chance of being equaled or exceeded in any given year.

BASE FLOOD ELEVATION -- The elevation of the one-percent annual flood.

BASEMENT -- An enclosed area which is below grade on all sides.

CERTIFICATE OF OCCUPANCY -- The official form used by Harford County certifying that the structure has been built consistent with approved plans, meets code requirements and may be legally inhabited or used for the intended purpose.

DEVELOPMENT -- Any man-made change to improved or unimproved real estate, including but not limited to buildings and other structures, dredging, filling, grading, paving, clearing, excavating, dumping, extracting and storing of materials or equipment. Development includes subdivision of land.

DIGITAL FLOOD INSURANCE RATE MAPS (hereinafter referred to as "D-FIRMs") -- Flood Insurance Rate Maps produced by FEMA in digital (non-paper) format for use in a Geographic Information System.

DIRECTOR-- The Director of the Department of Planning and Zoning.

DIRECTORS --The Directors of Planning and Zoning, Public Works, and Inspections, Licenses and Permits.

ELEVATED BUILDING -- For insurance purposes, a non-basement building which has its lowest floor raised above ground level by foundation walls, shear walls, posts, piers, pilings or columns.

ELEVATION CERTIFICATE -- The official form supplied by FEMA to certify as-built elevations of structures above mean sea level established by the National Geodetic Survey.

FEMA -- Federal Emergency Management Agency.

FIRMS -- Flood Insurance Rate Maps (hereinafter referred to as "FIRMs"). The maps published by FEMA establishing Special Flood Hazard Areas and Flood Insurance Premium Risk Zones.

FLOOD -- A general and temporary condition of partial or complete inundation of normally dry land areas from overflow of inland or tidal waters or rapid unusual accumulation of runoff from any source.

FLOODPLAIN -- The areas of a stream, river, water body, the contiguous land and other floodprone lands, which are susceptible to being inundated by water from any source.

FLOODPLAIN DISTRICT (hereinafter referred to as "the District") -- The floodplain areas subject to the Base Flood that are regulated by this Chapter. The District includes, at a minimum, the Special Flood Hazard Areas shown on the FIRMs as Zone A, AE, AO or V. As subdivision occurs, additional floodprone areas subject to the Base Flood will be added to the District for streams that drain more than 100 acres.

FLOOD PROFILE -- A graph of longitudinal profile showing the relationship of the water surface elevation of a flood event to location along a stream or river.

FLOODPROOFING -- Any combination of structural and nonstructural additions, changes or adjustments of properties and structures which reduce or eliminate flood damage to lands, water and sanitary facilities, structures and contents of buildings.

FLOOD PROTECTION ELEVATION -- For the purposes of this Chapter, it is the Base Flood Elevation plus one foot.

FLOODWAY -- The channel and adjacent land area of a watercourse required to discharge the waters of the Base Flood without increasing the water surface elevation more than one foot.

FLOODWAY FRINGE -- That portion of the floodplain outside the Floodway (where a Floodway has been determined) or in areas where detailed study data, profiles and Base Flood Elevations have been established.

GEOGRAPHIC INFORMATION SYSTEM (hereinafter referred to as "GIS") -- A computer system with a spatial component used to store geographical information and associated relational databases.

HISTORIC BUILDING OR STRUCTURE -- Designated site recognized in the Maryland Historic Trust Inventory of Historic Sites, the National Register of Historic Places or as a County Landmark.

LOMA -- Letter of Map Amendment (hereinafter referred to as "LOMA"). A letter issued by FEMA to amend the FIRMs and D-FIRMs based on site-specific data.

LOMR -- Letter of Map Revision (hereinafter referred to as "LOMR"). A letter issued by FEMA to revise the FIRMs and D-FIRMs.

LOWEST FLOOR -- The lowest floor of the lowest enclosed area (including basement). An unfinished enclosure constructed of flood resistant materials usable solely for parking of vehicles, storage or building access in an area other than a basement area is not considered a building's "lowest floor," provided that such enclosure is supplied with water equalizing vents and built to withstand hydrostatic forces.

MANUFACTURED HOME -- A transportable structure which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities.

MOBILE HOME -- See definition of manufactured home.

NECESSARY INFRASTRUCTURE -- The provision of public roads and bridges for pedestrian and vehicular traffic, water supply, distribution, sanitary disposal collection systems (water and sewer lines), gas lines, electrical transmission lines, interstate pipelines and cable television lines.

NEW CONSTRUCTION -- Structures for which the start of construction, as herein defined, commenced on or after April 19, 1983 and includes any subsequent improvements.

NONCONFORMING STRUCTURE -- Any existing structure that does not meet the current requirements of the Floodplain Chapter.

NONTIDAL FLOODPLAIN -- Floodplains contiguous to streams and rivers. They consist of Floodways and Floodway fringe or Approximate Floodplain areas. Nontidal floodplain may have detailed engineering study data, profiles and water surface elevations, or may have approximate delineations only.

ONE-PERCENT ANNUAL FLOOD -- A flood that has a one percent chance of being equaled or exceeded in any given year. This is also referred to as the one-hundred-year flood.

PERMANENT CONSTRUCTION -- Any structure occupying a site for more than 180 days per year.

RECREATIONAL VEHICLE -- A vehicle built on a single chassis which is 400 square feet or less at the longest horizontal projection, self propelled or towable, and designed primarily for temporary living while traveling or camping.

REPETITIVE LOSS PROPERTIES -- A building covered by a contract for flood insurance that has incurred a flood-related damage on two separate occasions during a 10-year period ending on the date of the event for which a second claim is made, in which the cost of repairing the flood damage on the average equals or exceeded 25% of the market value of the building at the time of each such flood event.

SPECIAL FLOOD HAZARD AREA -- The land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. The area designated Zone A, Zone AO, Zone AE or numbered Zone A on the FIRMs published by FEMA.

START OF CONSTRUCTION -- The date of issue of the building permit for any development, including new construction and substantial improvements, provided that the actual start of the construction or improvement was within 180 days of permit issuance. If not, then the actual start of construction is the placement of slab or footings, piles, columns or actual placement of a manufactured home. For substantial improvement, the start of construction is the first alteration of any structural part of the building.

STREAM -- Those perennial streams, mapped on the most recent GIS maintained by Harford County government, that maintain a baseflow during a year of average rainfall.

STRUCTURE -- A walled and roofed building, including but not limited to manufactured homes, garages, barns, sheds, gas and liquid storage tanks.

SUBDISTRICTS -- Floodway, Floodway fringe, Approximate Floodplain and tidal floodplain.

SUBSTANTIAL DAMAGE -- Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50% of the market value of the structure before the damage occurred. Substantial damage also includes repetitive loss properties.

SUBSTANTIAL IMPROVEMENT -- any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure before the "start of construction" of the improvement. This term includes structures that have incurred

'substantial damage', regardless of the actual repair work performed. This term includes any repairs to repetitive loss properties as identified by the Federal Insurance Administration. This term does not, however, include either:

- A. Any project for improvement of a structure to correct existing violations of state or local health, sanitary or safety code specifications which have been identified by the local code enforcement official and which are the minimum to assure safe living conditions; or
- B. Any alteration of a Historic Structure provided that the alteration will not preclude the structure's continued designation as a Historic Structure.

TEMPORARY STRUCTURE -- Any structure completely removed upon the expiration of 180 days or less, as stated in the building permit.

TIDAL FLOODPLAIN -- Those portions of the Floodplain District subject to coastal or tidal flooding as described in the most recent Flood Insurance Study for Harford County.

UTILITIES -- A public or private service owned and operated for the benefit of the public, including but not limited to gas lines, electrical and telephone systems, sewer and water lines, sewage pumping stations, electrical transmission lines and interstate pipelines.

ARTICLE II. Establishment of the Floodplain District

§ 131-5. Establishment.

- A. Harford County hereby establishes a Floodplain District to include areas subject to inundation by the waters of the one-percent annual flood. The source of this delineation shall be, at a minimum, the Special Flood Hazard Areas delineated on the FIRMs and described in the most recent "Flood Insurance Study for Harford County, Maryland and Incorporated Areas," prepared by FEMA. The District shall also include floodprone areas delineated per Sections 131-7 and 131-8.
- B. The Floodplain District shall be comprised of the following subdistricts and as depicted on the FIRMs:
 - (1) Floodway.
 - (2) Floodway fringe.
 - (3) Approximate Floodplain.
 - (4) Tidal floodplain.

§ 131-6. Floodplain Boundaries.

- A. The regulatory floodplain boundary shall be established using the Base Flood Elevations from the most recent "Flood Insurance Study for Harford County, Maryland and Incorporated Areas." Where map boundaries and elevations disagree, elevations prevail.
- B. When Base Flood Elevations are not provided in the Flood Insurance Study (the Approximate Floodplain), the property owner/applicant must use the best available data to determine the elevation of the one-percent annual flood. Detailed topographic information may also be used to locate the limits of the District. Approval by FEMA is not required.
- C. Where no other data is available, the delineation of the Approximate Floodplain may be determined by acceptable engineering methods described in FEMA publication #265 Dated July 1995: "Managing Floodplain Development In Approximate A Zone Areas: A Guide For Obtaining And Developing Base (100 Year) Flood Elevations."

§ 131-7. Removal from the Special Flood Hazard Areas.

Changes to the Floodplain District boundary, which remove any area delineated as Special Flood Hazard Area on the FIRMs, must be reviewed and approved by FEMA. The property owners requesting a change to the FIRMs shall apply for a LOMR and submit the necessary technical and scientific data to Harford County. The Departments of Planning and Zoning and Public Works shall review the information and forward the data to FEMA within six months in accordance with 44 C.F.R. Ch. 1 §60 and 65. All changes to the FIRMs and the Flood Insurance Study shall be subject to the review and approval of FEMA and the Maryland Department of the Environment (hereinafter referred to as "MDE"). The FIRMs shall not be considered amended until written approval is received from FEMA.

§ 131-8. Additions to Floodplain District.

- A. The Departments of Planning and Zoning and Public Works may approve additions to the District based on data submitted in accordance with Subsection B.
- B. The County may use any flood study that is more restrictive than the FEMA studies or goes beyond the FEMA minimum requirements provided the flood study has been prepared and certified by a professional engineer registered in Maryland in compliance with acceptable engineering standards.
- C. For any subdivision of land, which includes a stream that receives drainage from an area of 100 acres or more and has no mapped floodplain, the property owner shall delineate a Floodplain District on the preliminary plan and final plat. The delineation of the floodplain shall be determined by acceptable engineering standards or by the buffer method described below:
 - (1) For streams draining less than 400 acres and more than 100 acres, the property owner may choose to protect the floodplain through a buffer method. This stream buffer will be a minimum distance of 75 feet on both sides of the centerline of the stream and may be expanded where the topography indicates a wider floodplain area. The stream buffer must be approved by the Harford County Department of Public Works.
 - (2) For streams that have no mapped floodplain and which drain an area greater than 400 acres, the Base Flood and floodplain must be delineated by a professional engineer registered in Maryland using acceptable engineering methods and approved by the Harford County Department of Public Works.

ARTICLE III. Development Regulations

§ 131-9. General.

- A. In order to prevent excessive damage to buildings and structures and to allow for the natural and beneficial floodplain functions, construction and development in the floodplain is strongly discouraged. Where hazards or risks are identified by the Department of Planning and Zoning, development in the floodplain shall not occur when alternative locations exist on the parcel. Before any building or grading permits are issued, the applicant shall demonstrate that new structures cannot be located out of the floodplain and that encroachments onto the floodplain are minimized.
- B. All development shall be undertaken in a manner, which minimizes adverse impacts on the environment and the citizens of Harford County as determined by the Director of the Department of Planning and Zoning.
- C. A plan for permanent plantings, including trees, should provide for adequate vegetative cover within the District to prevent erosion. The choice of plant materials shall direct surface runoff away from structures and shall not increase surface runoff onto neighboring properties.

§ 131-10. Conflicts.

In the event that a proposed building, structure or substantial improvement is cited in two different floodplain subdistricts or in a subdistrict with two different Base Flood Elevations, the most restrictive regulations and/or higher flood elevation shall prevail.

§ 131-11. Tidal Floodplain, Approximate Floodplain, Floodway Fringe.

In order to receive authorization to build in the floodplain the following conditions must be met:

- A. Residential structures.
 - (1) Elevation Requirements. All new or substantially improved residential structures, including manufactured homes, shall have the lowest floor elevated to or above the Flood Protection Elevation. If a building is in the floodplain and has been elevated in any way, a basement is not permitted.
 - (2) The elevation of the lowest floor shall be certified by a professional engineer registered in Maryland or registered professional land surveyor on the FEMA elevation certificate, after the lowest floor is in place.
 - (3) Enclosures below the Flood Protection Elevation must be constructed to withstand hydrostatic and hydrodynamic forces and the effects of buoyancy using water equalizing vents. (See Section 131-18)
 - (4) The service facilities such as electrical, plumbing and heating equipment shall be elevated to or above the Flood Protection Elevation.

B. Nonresidential structures.

- (1) All new or substantially improved nonresidential structures shall have the lowest floor elevated to or above Flood Protection Elevation.
- (2) The service facilities such as electrical, plumbing and heating equipment shall be elevated to the Flood Protection Elevation.
- (3) If it is proven to the Directors that elevation is not feasible on a specific site, a Floodplain Authorization may be granted for floodproofing nonresidential structures. Any floodproofing modifications must be approved by the Department of Inspections, Licenses and Permits and certified by a professional engineer registered in Maryland or architect to insure that areas below the Flood Protection Elevation are watertight with walls substantially impermeable to the passage of water and with structural components capable of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy.

C. Where flood control, watershed management and flood-prone property acquisition plans exist, all development shall be consistent with such plans.

§ 131-12. Floodway.

Floodways present increased risks to human life and property because of their faster and deeper flowing waters. Floodways shall be preserved to carry the discharge of the Base Flood.

- A. Fill is not permitted in the Floodway.
- B. Essential utilities, roads and necessary infrastructure are permitted in the Floodway provided necessary state and federal approvals and/or permits are obtained and they are floodproofed to minimize or eliminate flood damage from the Base Flood.
- C. Other than for utilities, new structures are prohibited in the Floodway.
- D. Only designated Historic Structures located in the Floodway may be granted Floodplain Authorization for substantial improvements.
- E. Man-made obstructions which may impede, retard or change the direction of the flow of water or any materials that may be carried downstream to cause damage are prohibited in the Floodway.

ARTICLE IV. Subdivision Approval

§ 131-13. Preliminary Plan.

All preliminary plans for the subdivision of land shall indicate the limits of the one-percent annual flood using the Base Flood Elevations from the Flood Insurance Study or the best available data, as described in FEMA's regulations and bulletins. If the subdivision plan includes a stream, which has a drainage area of more than 100 acres, the developer shall establish a floodplain as described in § 131-8. For developments greater than 5 acres or 50 lots with Approximate Floodplains, Base Flood Elevations shall be established in accordance with the methodology used in FEMA's Flood Insurance Studies. This Floodplain District shall be shown on the preliminary plan. All subdivision plans, which include areas identified as floodplains shall be reviewed by Harford County to determine that:

- A. The proposal is consistent with the need to minimize flood damage.
- B. All public and private utilities and facilities (including sewer, water, telephone, electric, gas, etc.) are located, constructed and floodproofed to minimize or eliminate flood damage pursuant to §131-21.
- C. Drainage is provided to reduce exposure to flood hazards to the site and to neighboring properties.
- D. Measures have been taken to minimize adverse environmental impacts of the proposed development.
- E. Within new subdivisions, the Floodplain District and its natural vegetation shall be preserved and dedicated to natural areas, open space, recreation and similar compatible uses by deed restriction, restrictive covenants or donation to a land trust.
- F. The building pad shall be out of the floodplain.
- G. If the subdivision alters the Floodplain District as depicted on the FIRMs, an application for a LOMR or a LOMA including all the necessary supporting documentation must be received by FEMA before any grading or building permits can be issued.

§ 131-14. Final Plats.

The limits of the one-percent annual flood as identified above and the source of the floodplain delineation shall be shown on the final plats as a Floodplain District. All necessary permits must be obtained from appropriate State and Federal agencies before final plat approval.

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ARTICLE V. Specific Requirements, Supplementary Regulations

§ 131-15. Placement of Buildings and Materials.

In general, buildings and accessory structures should be located entirely out of the floodplain or on land that is least susceptible to flooding. All structures permitted in the floodplain shall be oriented so as to offer the least resistance to the flow of floodwaters.

§ 131-16. Nonconforming Structures.

- A. Existing nonconforming structures and/or development shall not be substantially improved, except for Historic Structures.
- B. The proposed repair or reconstruction of a designated Historic Structure must be the minimum necessary to preserve the historic character and design of the structure. A Floodplain Authorization may be granted provided such activity does not cause an increase in the elevation of the Base Flood and will not preclude the structure's continued historic designation.
- C. Within the Floodway, the original at-grade perimeter (or footprint) of existing nonconforming structures and/or development shall not be increased.
- D. The modification, alteration, repair, reconstruction or improvement of any kind of a nonconforming structure and/or development to an extent or amount of less than 50% of its market value shall be elevated and/or floodproofed to the greatest extent possible and must be approved by the National Flood Insurance Program State Coordinator for Maryland.
- E. In the event that any structure located in the Floodway sustains substantial damage, as defined herein, every effort shall be made to acquire and remove the damaged structure from the Floodway using funds available from the Maryland Flood Management Grant Program, Program Open Space, federal mitigation programs or other sources.

§ 131-17. Fill.

- A. Fill is discouraged because storage capacity is removed from floodplains, natural drainage patterns are adversely altered and erosion problems can develop. The use of fill shall be limited to the elevation of individual structures and public road crossings. Other methods of elevating structures should be considered first.
- B. To allow the elevation of individual structures, the amount of fill used shall be the minimum necessary. Floodplain Authorization for fill shall be based on findings by the Directors that the minimum fill being used for raising the structure is the most feasible alternative.
- C. Fill, if approved, shall meet the following conditions:
 - (1) The flood storage capacity of the floodplain shall not be affected and flood heights shall not be increased (0.000 feet) unless compensatory storage is provided. The space occupied by the authorized fill below Base Flood Elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the Base Flood Elevation. All such excavations shall be constructed to drain freely to the watercourse.

- (2) Flooding from any source shall not be increased for neighboring properties. Neighboring and adjacent properties shall not be adversely affected in any way nor shall drainage problems be caused or aggravated as a result of the fill.
 - (3) Fill shall not be placed in the Floodway except for essential utilities and necessary infrastructure.
 - (4) Fill shall not be placed in tidal or nontidal wetlands without the required state and federal permits.
- D. In the event buildings on adjacent properties are known or determined to be subject to flooding under current conditions, the Director may require submission of hydrologic and hydraulic analyses to adequately demonstrate that the effects of the proposed fill will not increase flooding on neighboring properties. Additional fill for landscaping purposes is not permitted.
- E. Where allowed, fill material shall meet the following additional requirements:
 - (1) Fill shall consist of soil or rock materials only. Landfills, dumps and sanitary soil fills shall not be permitted. Dredged material may be used as fill only upon certification of suitability by a registered professional engineer.
 - (2) Fill material shall be compacted to 95% of the maximum density obtainable with the standard proctor test method issued by The American Society For Testing And Materials (ASTM standard D-698) to provide the necessary stability and resistance to erosion, scouring or settling.
 - (3) Fill slopes shall be no steeper than one vertical to two horizontal, unless substantiating data justifying steeper slopes are submitted to and approved by the Department of Public Works.
- F. An engineer shall inspect the fill activity. A certification sealed by a professional engineer registered in Maryland shall be submitted prior to approval of a building permit for compliance with this Section.

§ 131-18. Structures and Enclosures Below Base Flood Elevation.

Structures and enclosures (e.g., sheds, garages and foundations) below Base Flood Elevation must meet or exceed the following standards for water equalizing venting, anchoring and nonconversion:

- A. Portions of structures and enclosures built below Base Flood Elevation shall have water-equalizing vents:
 - (1) A minimum of two openings on separate sides of the structure having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
 - (2) The bottom of all openings shall be no higher than one foot above grade.

- (3) Openings may be equipped with screens, louvers, valves or other coverings or devices, provided that they permit the automatic entry and exit of floodwaters.
 - (4) The enclosed area of the structure shall not qualify as a basement and must be constructed on or above grade.
- B. Structures shall be firmly anchored in accordance with accepted engineering practices to prevent flotation, collapse or lateral movement.
- C. Service facilities such as electrical, plumbing and heating equipment shall be elevated to the Flood Protection Elevation.
- D. Fully enclosed areas below the Flood Protection Elevation shall be used solely for the parking of vehicles, access to the building and storage. For enclosed structures exceeding 300 square feet, a Declaration of Land Restriction which prohibits the use of the structure as habitable space shall be recorded in the land records of Harford County. For areas less than 300 square feet, an agreement not to convert the area to habitable space must be signed by the applicant and filed with the building permit. The permitted structure may not change from the use permitted nor may it be used for human habitation without first complying with the construction requirements of this Chapter.
- E. A statement shall be placed on the building plans stating the structure is in the Floodplain District.
- F. The chart below summarizes the requirements and conditions for the most common structures and enclosures built below Base Flood Elevation in the Approximate, Tidal and Floodway Fringe Floodplains.

TABLE 1 NON-HABITABLE STRUCTURES BELOW BASE FLOOD ELEVATIONS (this chart does not apply to structures in the floodway.)					
BUILDING TYPE	USE	SIZE SQUARE FEET	ENGINEER NEEDED?	ALLOWED UNDER THIS CHAPTER	CONDITIONS
ACCESSORY STRUCTURES (Smaller sheds)	Storage	Up to 300	NO	YES	Vent and anchor Non-conversion Agreement recorded with permit.
ACCESSORY STRUCTURES (Larger sheds)	Storage	300 – 600	YES	YES	Vent, anchor, Declaration of Land Restriction
BASEMENT	Family room Workshop, Laundry,	Varies	YES	NO	Basements are considered the lowest floor. A basement used for living space must be elevated to Flood Protection Elevation
CRAWL SPACE	Support	Height must be less than six feet.	YES	YES	No utilities or heating If the height exceeds six feet, a Declaration of Land Restriction is required or it may be considered the lowest floor.
FOUNDATIONS	Support	Varies	YES	YES	Vent, anchor
GARAGE	Parking & Storage	Varies	YES	YES	Vent, anchor, Declaration of Land Restriction
STAIRCASE (enclosed)	Passage to upper floors	Varies	YES	yes	Must be used only as a passage way and for storage.

§ 131-19. Storage.

Materials that are buoyant, flammable, explosive or that in times of flooding could be injurious to human, animal or plant life shall not be stored in any portion of the floodplain unless the items are anchored or elevated. Exceptions may be made for fuel storage at water dependent facilities when installed in accordance with the National Fire Protection Association or other applicable standards, such as anchoring or elevating. Commercial fuel storage tanks must be certified by a professional engineer registered in Maryland to be adequately anchored.

§ 131-20. Manufactured Homes.

New manufactured homes are prohibited in the Floodway. In other Floodplain Districts, all new, replacement or substantially improved manufactured homes shall be:

- A. Elevated so that the lowest floor is above Flood Protection Elevation.
- B. Placed to provide minimum resistance to flood waters.

- C. Securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. Methods of anchoring shall be designed, inspected and approved by a professional structural engineer registered in Maryland to withstand flood forces. FEMA publication #85: "Manufactured Home Installation In Flood Hazard Areas," should be consulted for specific recommendations.

§ 131-21. Utilities.

The placement of utilities in the floodplain is discouraged, especially in the Floodway. If no feasible alternative exists to the location of utilities in the floodplain, the location, design and construction of such utilities shall be minimized to eliminate flood damage.

A. Public utilities.

- (1) Water and sanitary sewer facilities and systems shall be located, designed and constructed to minimize or eliminate flood damages and the infiltration of floodwaters and to prevent the discharge of untreated sewage into floodwaters.
- (2) Gas meters and appliances and electrical and telephone shall be located, elevated or constructed to minimize the chance of impairment during a flood.
- (3) All proposals to offset the effects of the construction of public utilities in the Floodway by construction of stream modifications shall be documented by an engineering study prepared by a professional engineer registered in Maryland. The study shall evaluate the effects of such construction and shall be submitted to FEMA for their review and approval.
- (4) The construction of utilities must conform to FEMA standards and be able to withstand the Base Flood without significant damage from floodwaters.

B. Private utilities.

- (1) On-site sewage disposal systems, including septic tanks, cesspools, seepage pits and drain fields, are prohibited in all floodplain zones in accordance with state and local regulations.
- (2) All outlets and electrical installations, such as heat pumps, air conditioners, gas meters, appliances, water heaters, furnaces, generators and panel boxes must be installed at or above the Flood Protection Elevation.
- (3) All permanent plumbing installations such as toilets, sinks, water heaters, pressure tanks and furnaces must also be installed at or above Flood Protection Elevation.

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ARTICLE VI. Authorizations for Floodplain Development

§ 131-22. Application for Floodplain Authorization.

- A. For any development in the Floodplain District, the property owner shall submit to the Department of Planning and Zoning an application for a Floodplain Authorization. Any necessary permits from Federal and State agencies (such as Waterway and Wetland Permits) shall be obtained before an application is approved. Receipt of Federal and State Permits does not exempt development from the provisions of this Chapter.
- B. The property owner must:
 - (1) Show that no reasonable alternative site for the development exists outside the floodplain;
 - (2) Locate the structure to offer minimum resistance to the flow of floodwaters;
 - (3) Prepare a site plan showing the location of the project relative to Floodways and floodplains; and
 - (4) Provide supporting documentation as required for the processing of the building permit.

§ 131-23. Conditions of Floodplain Authorization.

- A. All development in the floodplain must meet certain minimum standards set by this Chapter and obtain authorization from the director. Prior to issuance of a Floodplain Authorization, the Director must consider the beneficial and valuable functions of floodplains in their natural state for the storage and discharge of floodwaters against the desire to develop in the floodplain.
- B. The granting of a Floodplain Authorization shall be subject to the following conditions:
 - (1) That the development is the minimum necessary.
 - (2) That the natural floodplain functions are preserved.
 - (3) That the development has negligible impacts to the floodplain and does not increase flood heights or hazards.
 - (4) The necessary federal and state permits have been obtained.

§ 131-24. Floodplain Authorization Requirements.

- A. Floodplain Authorization is required for:
 - (1) New residential construction or improvements to residential structures, including garages, foundations, sheds or accessory structures.
 - (2) New nonresidential construction and improvements to nonresidential structures or portions thereof.

- (3) Reconstruction, rehabilitation or restoration of structures listed in the National Register of Historic Places or State Inventory of Historic Places.
- B. Floodplain Authorization is not required for the following, however, these development projects require building permits:
 - (1) In-ground swimming pools and fences in the Approximate Floodplain, Tidal Floodplain and Floodway Fringe, provided no fill is used.
 - (2) Structures with no walls (including but not limited to pavilions and gazebos).
 - (3) Piers and docks.
 - (4) Decks attached to no more than two walls.
 - (5) Patios.
 - (6) Unenclosed porches.
 - (7) Buildings with less than three walls.

ARTICLE VII. Floodplain Variance

§ 131-25. Floodplain Variance Application.

In order to obtain relief from the requirements of this Chapter, a request for a Floodplain Variance must be submitted to the Director. The request shall include the following:

- A. The location and description of the project.
- B. Justification for the development.
- C. An engineering analysis with supporting documentation to meet the conditions set forth in §131-26.
- D. An acknowledgment that an increased premium rate for flood insurance may occur and that construction below the Base Flood increases risk to life and property.

§ 131-26. Conditions for Granting the Variance.

Floodplain Variances shall only be granted upon findings by the Director, with the concurrence of the Director of Public Works and the Director of Inspections, Licenses and Permits, that the development complies with each of the following conditions, which are consistent with, sound floodplain management:

- A. Good and sufficient cause is demonstrated.
- B. Exceptional hardship exists (economic hardship shall not be considered exceptional).
- C. The proposed development is the minimum necessary to afford relief.
- D. Development shall not increase flood heights (0.000), shall not increase upstream or downstream flooding and shall not cause or aggravate drainage problems or stormwater management problems on off-site properties.
- E. Additional threats to public safety are not posed.
- F. A determination that the granting of a Floodplain Variance will not result in extraordinary public expense or create nuisances, cause fraud or victimization of the public.
- G. No conflicts occur with existing local laws or ordinances.
- H. Comments from the state National Flood Insurance Program Coordinator are received.
- I. Floodproofing requirements in FEMA regulations are met.
- J. Any other conditions that the Directors may deem necessary for the protection of the health, safety and welfare of the public.

§ 131-27. Natural Channel and Watercourses.

The natural watercourse shall be maintained for protection of aquatic resources. In all floodplain zones, any development, which proposes to alter a watercourse, must obtain a Floodplain Variance. Any Floodplain Variance issued for the alteration of watercourses must assure that the conditions for encroachment in the Floodway are approved by FEMA, adverse impacts to aquatic resources are minimized and the public good outweighs the adverse impacts.

§ 131-28. Grant of Variance.

Floodplain variances shall not be granted for:

- A. The placement of fill in the Floodway except for that associated with public roads. Compensatory storage must be provided.
- B. New structures in the Floodway except for that associated with necessary infrastructure.
- C. Storage of materials or storage of equipment in the Floodway.
- D. Substantial improvements of nonconforming structures in the Floodway except for historic buildings.
- E. Encroachment in the Floodway if any increase in the Base Flood will result.

§ 131-29. Issuance of Floodplain Variances.

- A. The Variance granted by the Directors shall be the minimum necessary, considering the flood hazard, to afford relief.
- B. For any Floodplain Variance issued, a letter shall be sent to the applicant indicating the terms and conditions of the Floodplain Variance, the increased risk to life and property in granting the Variance and the increased premium rates for National Flood Insurance coverage.
- C. The applicant shall be notified in writing of the requirement for recordation of these conditions in the land records of Harford County prior to obtaining a permit.
- D. The granting of a Floodplain Variance does not exempt the applicant from all required Federal and State permits. The applicant must secure all necessary state and federal permits before proceeding with the development project.

ARTICLE VIII. Administrative Procedures.

§ 131-30. Permits.

A. Grading permits.

- (1) Any grading in the floodplain requires a Floodplain Authorization from the Department of Planning and Zoning. Grading may be considered fill in the floodplain and regulated as such.
- (2) Prior to issuance of a grading permit for development within the floodplain, the developer/contractor shall provide evidence that all necessary permits have been received from the State of Maryland and the Federal government.
- (3) If the development includes changes to the FIRM, an application for Conditional Letter of Map Revision or Amendment and all the necessary documentation must be received by FEMA before a Floodplain Authorization can be considered.
- (4) In addition to the above requirements, the applicant shall provide a sealed certification from a professional engineer registered in Maryland that the flood-carrying capacity within the altered floodplain will be maintained.

B. Building permits. Before a building permit can be issued, a Floodplain Authorization must first be obtained from the director. The information on the building permit shall include, at a minimum:

- (1) Names, address and phone number of the owner/applicant.
- (2) A site plan, drawn to scale, showing the location of the existing and proposed structures relative to streams, rivers, Floodways and floodplains.
- (3) Base Flood Elevations (where available).
- (4) Site Plans showing elevation contours, plant materials and ground cover to be used for soil stabilization.
- (5) The proposed elevation of the lowest floor and method of elevation, if applicable.
- (6) Copies of the Waterway Permit or a written statement from the issuing authority indicating that a Waterway Permit is not required from the United States Army Corps of Engineers or MDE.
- (7) If wetlands are identified on the site plan, a copy of the Wetlands Permit.

C. All improvements, modifications and additions to existing structures will be evaluated based on their percentage of the assessed value of the home (not including land value) using the average of two estimates by licensed Maryland contractors and the latest assessment value (real property value) available from the Maryland Department Of Assessments And Taxation. Improvements, modifications, additions, reconstruction and repairs to existing structures shall be counted cumulatively over a five-year period and will be considered Substantial Improvements when the cumulative cost of the improvements has increased the value of the structure above 50%.

§ 131-31. Inspections.

- A. After the issuance of a grading permit or building permit by Harford County, no changes of any kind shall be made to the application, permit or any of the plans, specifications or other documents submitted with the application without the written consent of Harford County.
- B. The premises shall also be subject to inspection by MDE.
- C. If the Department of Inspections, Licenses and Permits determines that the work is not in compliance with the conditions of the Floodplain Authorization, building permit and applicable laws, they shall revoke the building permit and report such fact to MDE for whatever action it considers necessary.
- D. An as-built Elevation Certificate prepared by a registered professional land surveyor or professional engineer registered in Maryland certifying the "as-built" condition of the subject construction must be completed and the structure adequately elevated before a framing inspection can be conducted and approved. In addition, a Certificate of Occupancy shall be required for all construction and substantial improvements in the Floodplain District and shall not be issued until Harford County has been provided with the completed elevation certificate.

§ 131-32. Records.

A record of all Floodplain Authorizations and variance actions, including justifications for their issuance, shall be maintained by the Department of Planning and Zoning. These records shall be available upon request by FEMA or its authorized agent (State National Flood Insurance Program Coordinator) during periodic assessments of Harford County's participation in the National Flood Insurance Program. All documents needed to support any Floodplain Authorization such as Elevation Certificates, Variance Actions, LOMAs and LOMRs shall be available for review during these assessments.

§ 131-33. Violations.

- A. Any person who fails to comply with any or all of the requirements or provisions of this Chapter shall be guilty of a misdemeanor and, upon conviction, shall be fined not more than \$1,000 or imprisoned not more than six months per offense, or both, at the discretion of the court.
- B. Each day during which any violation of this Chapter continues shall constitute a separate offense.
- C. Other remedies. The County may institute injunctive or other appropriate action or proceedings at law or equity for the enforcement of this Chapter. Any court of competent jurisdiction may issue restraining orders, temporary or permanent injunctions or other appropriate forms of remedy or relief to restrain or correct violations of this Section.

§ 131-34. Penalties and Administrative Fees.

- A. The imposition of a fine or penalty for any violation of or noncompliance with this Chapter shall not excuse the violation or noncompliance or permit it to continue, and all such persons shall be required to correct or remedy such violations and noncompliance within a reasonable time.
- B. Any structure constructed, reconstructed, enlarged, altered or relocated in noncompliance with this Chapter shall be declared by Harford County to be a public nuisance and abatable as such.
- C. The Federal Insurance Administrator and MDE shall be notified immediately, in writing, of any structure or property in violation of 44 C.F.R., Ch. 1.
- D. New or renewal national flood insurance may not be available for any structure remaining in violation or situated on property in violation of this Chapter.

§ 131-35. Public Information.

The Department of Planning and Zoning shall maintain copies of the Flood Insurance Study and the FIRMs, including all subsequent revisions and amendments to the maps. Copies of the FIRMs will be made available to the public for a fee. In addition, the County departments will provide assistance and information on Base Flood Elevations and the flood insurance purchase requirements for properties in Special Flood Hazard Areas. The floodplain determination information provided by the Department of Public Works and the Department of Planning and Zoning to the public is advisory and shall not constitute a guarantee against flooding or a precise determination concerning the flood risk of a particular property.

§ 131-36. Flood Insurance.

- A. Harford County has the responsibility under the National Flood Insurance Act, as amended, to adopt and enforce these floodplain management regulations and to inform the public of mandatory flood insurance coverage for properties located in the Special Flood Hazard Areas depicted on the FIRMs.
- B. An owner or lessee of property who believes the property has been erroneously included in a designated flood hazard zone on the FIRMs may submit scientific or technical information to FEMA for review for a possible map amendment.
- C. Flood insurance may be prohibitively expensive for construction undertaken pursuant to a variance obtained from the provisions of this Chapter.

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